



Express Mail No.: EL 4 US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Chan et al.

Serial No.: 09/783,472

Art Unit: 1743

Filed: February 14, 2001

Examiner: To be assigned

For: METHODS AND APPARATUSES FOR
CHARACTERIZATION OF SINGLE
POLYMERS

Attorney Docket No: 10066-021

TRANSMITTAL UNDER 37 C.F.R. § 1.27(c) OF VERIFIED STATEMENT
CLAIMING SMALL ENTITY STATUS

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

It is respectfully requested that the above-identified patent application be accorded Small Entity Status in view of the Verified Statement Claiming Small Entity Status which is submitted herewith. The Verified Statement has been executed by Eugene Chan, Chief Executive Officer of U.S. Genomics, Inc., on July 23, 2001 and declares that U.S. Genomics, Inc., the sole assignee of the above-identified application, qualifies as a small business concern under 37 C.F.R. § 1.27(a) and (c). An assignment to U.S. Genomics, Inc., is being submitted for recordation on even date herewith.

Applicants respectfully request that this document be made of record in the file history of the above-identified application, and that the application be accorded Small Entity Status.

Respectfully submitted,

Date October 24, 2001

Adriane M. Antler 32,605
Adriane M. Antler (Reg. No.)

PENNIE & EDMONDS LLP
1155 Avenue of the Americas
New York, New York 10036-2711
(212) 790-9090

Enclosure



3

DECLARATION FOR NON-PROVISIONAL PATENT APPLICATION*

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below at 201 et seq. beneath my name.

I believe I am the original, first and sole inventor if only one name is listed at 201 below, or an original, first and joint inventor if plural names are listed at 201 et seq. below, of the subject matter which is claimed and for which a patent is sought on the invention entitled

METHODS AND APPARATUSES FOR CHARACTERIZATION OF SINGLE POLYMERS

- ☐ is attached hereto and includes amendment(s) filed on (if applicable)
☒ was filed in the United States on February 14, 2001 as Application No. 09/783,472 (for declaration not accompanying application)
with amendment(s) filed on (if applicable)
☐ was filed as PCT international Application No. on and was amended under PCT Article 19 on (if applicable)

I hereby state that I have reviewed and understand the contents of the above identified application, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, §119(a)-(d) of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

EARLIEST FOREIGN APPLICATION(S), IF ANY, FILED PRIOR TO THE FILING DATE OF THE APPLICATION			
APPLICATION NUMBER	COUNTRY	DATE OF FILING (day, month, year)	PRIORITY CLAIMED
			YES <input type="checkbox"/> NO <input type="checkbox"/>
			YES <input type="checkbox"/> NO <input type="checkbox"/>

I hereby claim the benefit under Title 35, United States Code, §119(e) of any United States provisional application(s) listed below.

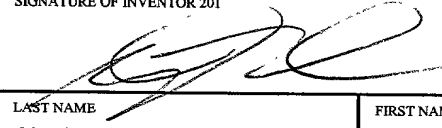
PROVISIONAL APPLICATION NUMBER	FILING DATE
60/149,020	August 13, 1999

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code §112, I acknowledge the duty to disclose information known to me which is material to patentability as defined in Title 37, Code of Federal Regulations, §1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

NON-PROVISIONAL APPLICATION SERIAL NO.	FILING DATE	STATUS		
		PATENTED	PENDING	ABANDONED
09/636,793	August 11, 2000		X	

* for use only when the application is assigned to a company, partnership or other organization.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

201	FULL NAME OF INVENTOR	LAST NAME Chan	FIRST NAME Eugene	MIDDLE NAME Y.	
	RESIDENCE & CITIZENSHIP	CITY Brookline	STATE OR FOREIGN COUNTRY Massachusetts	COUNTRY OF CITIZENSHIP United States	
	POST OFFICE ADDRESS	STREET 133 Park Street, Apt. 1001	CITY Brookline	STATE OR COUNTRY Massachusetts	ZIP CODE 02446
	SIGNATURE OF INVENTOR 201 			DATE 7/23/01	
202	FULL NAME OF INVENTOR	LAST NAME Gleich	FIRST NAME Lance	MIDDLE NAME C.	
	RESIDENCE & CITIZENSHIP	CITY Somerville	STATE OR FOREIGN COUNTRY Massachusetts	COUNTRY OF CITIZENSHIP United States	
	POST OFFICE ADDRESS	STREET 90 College Avenue #2	CITY Somerville	STATE OR COUNTRY Massachusetts	ZIP CODE 02144
	SIGNATURE OF INVENTOR 202			DATE	
203	FULL NAME OF INVENTOR	LAST NAME Wellman	FIRST NAME Parris	MIDDLE NAME S.	
	RESIDENCE & CITIZENSHIP	CITY Hillsborough	STATE OR FOREIGN COUNTRY New Jersey	COUNTRY OF CITIZENSHIP United States	
	POST OFFICE ADDRESS	STREET 61-3A Taurus Drive	CITY Hillsborough	STATE OR COUNTRY New Jersey	ZIP CODE 08876
	SIGNATURE OF INVENTOR 203			DATE	
204	FULL NAME OF INVENTOR	LAST NAME	FIRST NAME	MIDDLE NAME	
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP	
	POST OFFICE ADDRESS	STREET	CITY	STATE OR COUNTRY	ZIP CODE
	SIGNATURE OF INVENTOR 204			DATE	
205	FULL NAME OF INVENTOR	LAST NAME	FIRST NAME	MIDDLE NAME	
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP	
	POST OFFICE ADDRESS	STREET	CITY	STATE OR COUNTRY	ZIP CODE
	SIGNATURE OF INVENTOR 205			DATE	

**DECLARATION FOR NON-PROVISIONAL PATENT APPLICATION***

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below at 201 et seq. beneath my name.

I believe I am the original, first and sole inventor if only one name is listed at 201 below, or an original, first and joint inventor if plural names are listed at 201 et seq. below, of the subject matter which is claimed and for which a patent is sought on the invention entitled

METHODS AND APPARATUSES FOR CHARACTERIZATION OF SINGLE POLYMERS

- ☐ is attached hereto and includes amendment(s) filed on *(if applicable)*
☒ was filed in the United States on February 14, 2001 as Application No. 09/783,472 *(for declaration not accompanying application)*
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I hereby state that I have reviewed and understand the contents of the above identified application, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

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APPLICATION NUMBER	COUNTRY	DATE OF FILING (day, month, year)	PRIORITY CLAIMED
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09/636,793	August 11, 2000		X	

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	POST OFFICE ADDRESS	STREET 90 College Avenue #2	CITY Somerville	STATE OR COUNTRY Massachusetts	ZIP CODE 02144
	SIGNATURE OF INVENTOR 202 <i>Lance C. Gleich</i>			DATE 31 July 2001	
203	FULL NAME OF INVENTOR	LAST NAME Wellman	FIRST NAME Parris	MIDDLE NAME S.	
	RESIDENCE & CITIZENSHIP	CITY Hillsborough	STATE OR FOREIGN COUNTRY New Jersey	COUNTRY OF CITIZENSHIP United States	
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	SIGNATURE OF INVENTOR 204			DATE	
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	POST OFFICE ADDRESS	STREET	CITY	STATE OR COUNTRY	ZIP CODE
	SIGNATURE OF INVENTOR 205			DATE	



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	POST OFFICE ADDRESS	STREET 61-3A Taurus Drive	CITY Hillsborough	STATE OR COUNTRY New Jersey	ZIP CODE 08876
	SIGNATURE OF INVENTOR 203 			DATE 9-18-2001	
204	FULL NAME OF INVENTOR	LAST NAME	FIRST NAME	MIDDLE NAME	
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP	
	POST OFFICE ADDRESS	STREET	CITY	STATE OR COUNTRY	ZIP CODE
	SIGNATURE OF INVENTOR 204			DATE	
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	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP	
	POST OFFICE ADDRESS	STREET	CITY	STATE OR COUNTRY	ZIP CODE
	SIGNATURE OF INVENTOR 205			DATE	



01-04-02

sector 1/11

Express Mail No.: EL477033006 US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Chan et al.

Application No.: 09/783,472

Group Art Unit: 1743

Filed: February 14, 2001

Examiner: To Be Assigned

For: METHODS AND APPARATUSES FOR
CHARACTERIZATION OF SINGLE
POLYMERS

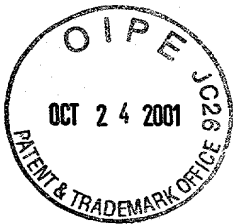
Attorney Docket No.: 10066-021

**POWER OF ATTORNEY BY ASSIGNEE
AND EXCLUSION OF INVENTOR(S) UNDER 37 C.F.R. §3.71**

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

The undersigned assignee of the entire interest in the above-identified subject application hereby appoints: S. Leslie Misrock (Reg. No. 18872), Berj A. Terzian (Reg. No. 20060), David Weild, III (Reg. No. 21094), Jonathan A. Marshall (Reg. No. 24614), Barry D. Rein (Reg. No. 22411), Stanton T. Lawrence, III (Reg. No. 25736), Charles E. McKenney (Reg. No. 22795), Philip T. Shannon (Reg. No. 24278), Francis E. Morris (Reg. No. 24615), Charles E. Miller (Reg. No. 24576), Gidon D. Stern (Reg. No. 27469), John J. Lauter, Jr. (Reg. No. 27814), Brian M. Poissant (Reg. No. 28462), Brian D. Coggio (Reg. No. 27624), Rory J. Radding (Reg. No. 28749), Stephen J. Harbulak (Reg. No. 29166), Donald J. Goodell (Reg. No. 19766), James N. Palik (Reg. No. 25510), Thomas E. Friebe (Reg. No. 29258), Laura A. Coruzzi (Reg. No. 30742), Jennifer Gordon (Reg. No. 30753), Allan A. Fanucci (Reg. No. 30256), Geraldine F. Baldwin (Reg. No. 31232), Victor N. Balancia (Reg. No. 31231), Samuel B. Abrams (Reg. No. 30605), Steven I. Wallach (Reg. No. 35402), Marcia H. Sundeen (Reg. No. 30893), Paul J. Zegger (Reg. No. 33821), Edmond R. Bannon (Reg. No. 32110), Bruce J. Barker (Reg. No. 33291), Adriane M. Antler (Reg. No. 32605), Thomas G. Rowan (Reg. No. 34419), James G. Markey (Reg. No. 31636), Thomas D. Kohler (Reg. No. 32797), Scott D. Stimpson (Reg. No. 33607), Gary S. Williams (Reg. No. 31066), William S. Galliani (Reg. No. 33885), Ann L. Gisolfi (Reg. No. 31956), Todd A. Wagner (Reg. No. 35399), Scott B. Familant (Reg. No. 35514), Kelly D. Talcott (Reg. No. 39582), Francis D. Cerrito (Reg. No. 38100), Anthony M. Insogna (Reg. No. 35203), Brian M. Rothery (Reg. No. 35340), Brian D. Siff (Reg. No. 35679), Alan Tenenbaum (Reg. No. 34939), Michael J. Lyons (Reg. No. 37,386),



Express Mail No.: EL 477033006US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Chan et al.

Serial No.: 09/783,472

Art Unit: 1743

Filed: February 14, 2001

Examiner: To be assigned

For: METHODS AND APPARATUSES FOR
CHARACTERIZATION OF SINGLE
POLYMERS

Attorney Docket No: 10066-021

ASSOCIATE POWER OF ATTORNEY

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

The undersigned attorney of record in the above-identified application hereby
appoints

David B. Bernstein (Reg. No. 32,112)
U.S. Genomics, Inc.
6H Gill Street
Woburn, Massachusetts 01081
(Telephone No.: (781) 937-5550 x219)

her associate attorney to prosecute the said application, to make alterations and amendments
therein, and to transact all business in the Patent and Trademark Office in connection
therewith.

All correspondence relating to this application should continue to be addressed
to the principal attorney whose address is PENNIE & EDMONDS LLP, 1155 Avenue of the
Americas, New York, New York 10036-2711.

Respectfully submitted,

Date October 24, 2001

Adriane M. Antler 32,605
Adriane M. Antler (Reg. No.)

PENNIE & EDMONDS LLP
1155 Avenue of the Americas
New York, New York 10036-2711
(212) 790-9090

Garland T. Stephens (Reg. No. 37,242) and William J. Sipio (Reg. No. 34,514), all of Pennie & Edmonds LLP, whose addresses are 1155 Avenue of the Americas, New York, New York 10036, 1667 K Street N.W., Washington, DC 20006 and 3300 Hillview Avenue, Palo Alto, CA 94304, all of Pennie & Edmonds LLP (PTO Customer No. 20583), as its attorneys to prosecute this application and to transact all business in the United States Patent and Trademark Office connected therewith, said appointment to be to the exclusion of the inventors and their attorney(s) in accordance with the provisions of 37 C.F.R. §3.71, provided that, if any one of these attorneys ceases being affiliated with the law firm of Pennie & Edmonds LLP as partner, counsel, or employee, then the appointment of that attorney and all powers derived therefrom shall terminate on the date such attorney ceases being so affiliated.

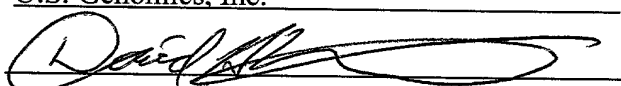
An assignment of the entire interest in the above-identified subject application:

☐ was recorded on _____ at reel/frame / _____.

☒ is submitted on even date herewith for recording. A copy of the Assignment is enclosed.

Please direct all correspondence for this application to customer No. 20583.

ASSIGNEE: U.S. Genomics, Inc.

Signature: 

Typed Name: ~~Eugene Y. Chan~~ David B. Bernstein

Position/Title: ~~Chief Executive Officer~~ General Counsel

Address: 6H Gill Street

Woburn, Massachusetts 01801

Date: September 24, 2001

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: ☒ Application of: Chan et al.
☐ Patent of:

☒ Application No.: 09/783,472
☐ Patent No.:

☒ Filed: February 14, 2001
☐ Issued:



Group Art Unit: 1743

Examiner: To be assigned

For: METHODS AND APPARATUSES FOR
CHARACTERIZATION OF SINGLE
POLYMERS

Attorney Docket No.: 10066-021

VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS
[37 C.F.R. § 1.27(a)(2)] - Small Business Concern

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

I hereby declare that I am

- ☐ the owner of the small business concern identified below:
☒ an official of the small business concern empowered to act in behalf of
the concern identified below:

Name of organization U.S. Genomics, Inc.

Address of organization 6H Gill Street

Woburn, Massachusetts 01801

I hereby declare that the above identified small business concern qualifies as a small business concern as defined in 37 C.F.R. § 1.27(a)(2), for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the person employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern and/or there is an obligation under contract or law by the inventor(s) to convey rights to the small business concern with regard to the invention entitled METHODS AND APPARATUSES FOR CHARACTERIZATION OF SINGLE POLYMERS by inventor(s) Chan et al. described in

- ☐ the specification filed herewith
☒ application no. 09/783,472 filed February 14, 2001
☐ patent no. issued

If the rights held by the above identified small business concern are not exclusive, each individual, concern or organization having rights to the invention is listed below and no rights to the invention are held by any person, other than the inventor, who could not qualify as an independent inventor under 37 C.F.R. § 1.27(a)(1) if that person made the invention, or by any concern which would not qualify as a small business concern under 37 C.F.R. § 1.27(a)(2), or a nonprofit organization under 37 C.F.R. § 1.27(a)(3).

FULL NAME _____
ADDRESS _____

☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

FULL NAME _____
ADDRESS _____

☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

FULL NAME _____
ADDRESS _____

☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. [37 CFR 1.28 (b)]

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, and patent issuing thereon, or any patent to which this verified statement is directed.

Send correspondence to: PENNIE & EDMONDS LLP Direct Telephone calls to:
1155 Avenue of the Americas PENNIE & EDMONDS LLP
New York, N.Y. 10036-2711 (212) 790-9090

Name of person signing _____ Eugene Y. Chan
Title of person other than owner _____ Chief Executive Officer
Address of person signing _____ U.S. Genomics, Inc.
_____ 6H Gill Street
_____ Woburn, Massachusetts 01801

Signature _____ Date 7/23/01

*NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities.
(37 CFR 1.27)

ASSIGNMENT

WHEREAS, WE, Eugene Y. Chan, Lance C. Gleich, and Parris S. Wellman, ASSIGNORS, citizens of the United States, residing at 133 Park Street, Apt. 1001, Brookline, Massachusetts 02446; 90 College Avenue #2, Somerville, Massachusetts 02144; and 61-3A Taurus Drive, Hillsborough, New Jersey 08876, respectively, are the inventors of the invention in for METHODS AND APPARATUS FOR CHARACTERIZATION OF SINGLE POLYMERS which we have executed an application for a Patent of the United States

☐ which is executed on ☐ even date herewith or ☐ _____

- ☒ which is identified by Pennie & Edmonds LLP docket no. 10066-021
☒ which was filed on February 14, 2001, Application No. 09/783,472

and WHEREAS, U.S. Genomics, Inc., a Massachusetts corporation having a principal place of business at 8 St. Mary's Street, Suite 922, 9th Floor, Boston, Massachusetts 02215, ASSIGNEE, is desirous of obtaining our entire right, title and interest in, to and under the said invention and the said application:

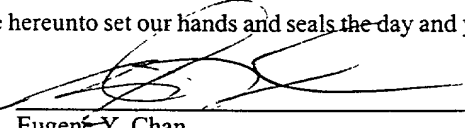
NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) to us in hand paid, and other good and valuable consideration, the receipt of which is hereby acknowledged, we, the said ASSIGNORS, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said ASSIGNEE, its successors, legal representatives and assigns, our entire right, title and interest in, to and under the said invention, and the said United States application and all divisions, renewals and continuations thereof, and all Patents of the United States which may be granted thereon and all reissues and extensions thereof; and all applications for industrial property protection, including, without limitation, all applications for patents, utility models, and designs which may hereafter be filed for said invention in any country or countries foreign to the United States, together with the right to file such applications and the right to claim for the same the priority rights derived from said United States application under the Patent Laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable; and all forms of industrial property protection, including, without limitation, patents, utility models, inventors' certificates and designs which may be granted for said invention in any country or countries foreign to the United States and all extensions, renewals and reissues thereof;

AND WE HEREBY authorize and request the Commissioner of Patents and Trademarks of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to the said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND WE HEREBY covenant and agree that we have full right to convey the entire interest herein assigned, and that we have not executed, and will not execute, any agreement in conflict herewith.

AND WE HEREBY further covenant and agree that we will communicate to the said ASSIGNEE, its successors, legal representatives and assigns, any facts known to us respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue and foreign applications, make all rightful oaths, and generally do everything possible to aid the said ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper protection for said invention in all countries.

IN TESTIMONY WHEREOF, We hereunto set our hands and seals the day and year set opposite our respective signatures.

Date July 23, 2001  L.S.
Eugene Y. Chan

Date _____, 2001 _____ L.S.
Lance C. Gleich

Date _____, 2001 _____ L.S.
Parris S. Wellman

State of Massachusetts)
) SS.:
County of Middlesex)

In the State of Massachusetts, county of Middlesex, on July 23, 2001, before me, David B. Bernstein, Notary Public, personally Appeared Eugene Y. Chan personally known to me on the basis of satisfactory evidence to be the person of that name, and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument, and he acknowledged the same to be his free act and deed.

WITNESS my hand and official seal

David B. Bernstein, Notary Public
Norfolk County
Commonwealth of Massachusetts
My Commission Expires Apr. 4, 2008


Notary Public

State of _____ }
County of _____ } SS.:

In the State of _____, county of _____, on _____, before me, _____, Notary Public, personally Appeared Lance C. Gleich personally known to me on the basis of satisfactory evidence to be the person of that name, and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument, and he acknowledged the same to be his free act and deed.

WITNESS my hand and official seal

Notary Public

State of _____ }
County of _____ } SS.:

In the State of _____, county of _____, on _____, before me, _____, Notary Public, personally Appeared Parris S. Wellman personally known to me on the basis of satisfactory evidence to be the person of that name, and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument, and he acknowledged the same to be his free act and deed.

WITNESS my hand and official seal

Notary Public

JOINT

ASSIGNMENT

WHEREAS, WE, Eugene Y. Chan, Lance C. Gleich, and Parris S. Wellman, ASSIGNORS, citizens of the United States, residing at 133 Park Street, Apt. 1001, Brookline, Massachusetts 02446; 90 College Avenue #2, Somerville, Massachusetts 02144; and 61-3A Taurus Drive, Hillsborough, New Jersey 08876, respectively, are the inventors of the invention in for METHODS AND APPARATUS FOR CHARACTERIZATION OF SINGLE POLYMERS which we have executed an application for a Patent of the United States

☐ which is executed on ☐ even date herewith or ☐ _____

☒ which is identified by Pennic & Edmonds LLP docket no. 10066-021

☒ which was filed on February 14, 2001, Application No. 09 783,472

and WHEREAS, U.S. Genomics, Inc., a Massachusetts corporation having a principal place of business at 8 St. Mary's Street, Suite 922, 9th Floor, Boston, Massachusetts 02215, ASSIGNEE, is desirous of obtaining our entire right, title and interest in, to and under the said invention and the said application:

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) to us in hand paid, and other good and valuable consideration, the receipt of which is hereby acknowledged, we, the said ASSIGNORS, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said ASSIGNEE, its successors, legal representatives and assigns, our entire right, title and interest in, to and under the said invention, and the said United States application and all divisions, renewals and continuations thereof, and all Patents of the United States which may be granted thereon and all reissues and extensions thereof; and all applications for industrial property protection, including, without limitation, all applications for patents, utility models, and designs which may hereafter be filed for said invention in any country or countries foreign to the United States, together with the right to file such applications and the right to claim for the same the priority rights derived from said United States application under the Patent Laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable; and all forms of industrial property protection, including, without limitation, patents, utility models, inventors' certificates and designs which may be granted for said invention in any country or countries foreign to the United States and all extensions, renewals and reissues thereof;

AND WE HEREBY authorize and request the Commissioner of Patents and Trademarks of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to the said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND WE HEREBY covenant and agree that we have full right to convey the entire interest herein assigned, and that we have not executed, and will not execute, any agreement in conflict herewith.

AND WE HEREBY further covenant and agree that we will communicate to the said ASSIGNEE, its successors, legal representatives and assigns, any facts known to us respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue and foreign applications, make all rightful oaths, and generally do everything possible to aid the said ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper protection for said invention in all countries.

IN TESTIMONY WHEREOF, We hereunto set our hands and seals the day and year set opposite our respective signatures.

Date _____, 2001 _____
Eugene Y. Chan L.S.

Date 31 July, 2001 Lance C. Gleich
Lance C. Gleich L.S.

Date _____, 2001 _____
Parris S. Wellman L.S.

State of _____)
County of _____) SS.:

In the State of _____, county of _____, on _____, before me, _____, Notary Public, personally Appeared Eugene Y. Chan personally known to me on the basis of satisfactory evidence to be the person of that name, and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument, and he acknowledged the same to be his free act and deed.

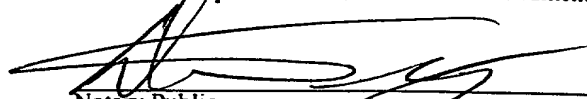
WITNESS my hand and official seal

Notary Public

State of MA.)
County of Middlesex) SS.:

In the State of MA., county of Middlesex, on 7/31/01, before me, Devin Gray, Notary Public, personally Appeared Lance C. Gleich, personally known to me on the basis of satisfactory evidence to be the person of that name, and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument, and he acknowledged the same to be his free act and deed.

WITNESS my hand and official seal


Notary Public
Devin Gray
Notary Public
Commission Expires 3/7/2003

State of)
County of) SS.:

In the State of _____, county of _____, on _____, before me, _____, Notary Public, personally Appeared Parris S. Wellman, personally known to me on the basis of satisfactory evidence to be the person of that name, and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument, and he acknowledged the same to be his free act and deed.

WITNESS my hand and official seal

Notary Public

ASSIGNMENT

WHEREAS, WE, Eugene Y. Chan, Lance C. Gleich, and Parris S. Wellman, ASSIGNORS, citizens of the United States, residing at 133 Park Street, Apt. 1001, Brookline, Massachusetts 02446; 90 College Avenue #2, Somerville, Massachusetts 02144; and 61-3A Taurus Drive, Hillsborough, New Jersey 08876, respectively, are the inventors of the invention in for METHODS AND APPARATUSES FOR CHARACTERIZATION OF SINGLE POLYMERS which we have executed an application for a Patent of the United States

☐ which is executed on ☐ even date herewith or ☐ _____

☒ which is identified by Pennie & Edmonds LLP docket no. 10066-021

☒ which was filed on February 14, 2001, Application No. 09 783,472

and WHEREAS, U.S. Genomics, Inc., a Massachusetts corporation having a principal place of business at 8 St. Mary's Street, Suite 922, 9th Floor, Boston, Massachusetts 02215, ASSIGNEE, is desirous of obtaining our entire right, title and interest in, to and under the said invention and the said application:

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) to us in hand paid, and other good and valuable consideration, the receipt of which is hereby acknowledged, we, the said ASSIGNORS, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said ASSIGNEE, its successors, legal representatives and assigns, our entire right, title and interest in, to and under the said invention, and the said United States application and all divisions, renewals and continuations thereof, and all Patents of the United States which may be granted thereon and all reissues and extensions thereof; and all applications for industrial property protection, including, without limitation, all applications for patents, utility models, and designs which may hereafter be filed for said invention in any country or countries foreign to the United States, together with the right to file such applications and the right to claim for the same the priority rights derived from said United States application under the Patent Laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable; and all forms of industrial property protection, including, without limitation, patents, utility models, inventors' certificates and designs which may be granted for said invention in any country or countries foreign to the United States and all extensions, renewals and reissues thereof;

AND WE HEREBY authorize and request the Commissioner of Patents and Trademarks of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to the said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND WE HEREBY covenant and agree that we have full right to convey the entire interest herein assigned, and that we have not executed, and will not execute, any agreement in conflict herewith.

AND WE HEREBY further covenant and agree that we will communicate to the said ASSIGNEE, its successors, legal representatives and assigns, any facts known to us respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue and foreign applications, make all rightful oaths, and generally do everything possible to aid the said ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper protection for said invention in all countries.

IN TESTIMONY WHEREOF, We hereunto set our hands and seals the day and year set opposite our respective signatures.

Date _____, 2001 _____ Eugene Y. Chan L.S.

Date _____, 2001 _____ Lance C. Gleich L.S.

Date September 18, 2001 Parris S. Wellman L.S.
Parris S. Wellman

State of _____)
) SS.:
County of _____)

In the State of _____, county of _____, on _____, before me, _____, Notary Public, personally Appeared Eugene Y. Chan personally known to me on the basis of satisfactory evidence to be the person of that name, and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument, and he acknowledged the same to be his free act and deed.

WITNESS my hand and official seal

Notary Public

State of)
County of) SS.:

In the State of _____, county of _____, on _____, before me, _____, Notary Public, personally Appeared Lance C. Gleich personally known to me on the basis of satisfactory evidence to be the person of that name, and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument, and he acknowledged the same to be his free act and deed.

WITNESS my hand and official seal

Notary Public

State of New Jersey,)
County of Middlesex) SS.:

In the State of New Jersey, county of Middlesex, on 9/18/2001, before me, Yvonne R. Johnson Notary Public, personally Appeared Parris S. Wellman personally known to me on the basis of satisfactory evidence to be the person of that name, and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument, and he acknowledged the same to be his free act and deed.

WITNESS my hand and official seal

Yvonne R. Johnson
Notary Public

YVONNE R. JOHNSON
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires May 24, 2005